

This APF Electronic Calculator (except for batteries), is warranted to be free from defects in material and workmanship for a period of one year from date of purchase by the consumer. If the product requires service due to defective materials or workmanship through normal use during a period of one year from date of purchase, it will be repaired provided the product has not been subject to misuse, abuse, altered or repaired by other than an APF Authorized Repair Center.

If you experience any difficulty during the warranty period — contact your dealer who will advise you of the nearest APF Authorized Repair Center. The unit is to be packaged carefully and shipped insured and prepaid to the APF Authorized Repair Center.

When the unit is received at the APF Authorized Repair Center, with evidence of purchase date within the warranty period, it will be repaired and returned to the sender. Note: The unit will be considered as out of warranty if evidence of consumer purchase within the warranty period is not received.

This warranty does not cover defects resulting from accident, alteration, improper use, abuse, tampering or failure of the user to follow operating procedures as outlined in the operating instructions, nor does it cover damage from handling or from Acts of God, such as lightning, windstorm and floods.

This warranty is in lieu of all other warranties expressed, implied or statutory, and all other obligations or liabilities of APF Electronics, Inc.; who neither assumes nor authorizes any person to assume for it any other obligation or liability in connection with its products.

This warranty applies only to a purchaser located and purchasing within the United States.

This warranty does not cover damage due to corrosive leakage from batteries.



APF ELECTRONICS, INCORPORATED
New York, N. Y. 10022

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APF

ELECTRONIC CALCULATOR

OPERATING INSTRUCTIONS



APF ELECTRONICS, INC. NEW YORK, N.Y. 10022

Modern electronic technology has provided a new tool for use in home, office or school. Rapid, silent and accurate calculations are now possible by use of the modern Electronic Calculator.

Your Electronic Calculator will perform addition, subtraction, multiplication and division functions in chain or mixed calculations. For division or multiplication, a stored constant (K) can be entered and remembered by the Calculator. You may work from an internal battery source or, by means of an A.C. adaptor, from any convenient 110-120 volts A.C. outlet.

To simplify operation, your calculator is programmed for "THINK AND TOUCH" - "THINK" the mathematical sequence and "TOUCH" the appropriate keys as you think - the correct answer instantly appears on the bright, clear eight-digit display. The decimal point automatically moves to the correct position.

On the following pages are detailed explanations of the operation of your Calculator. Read these pages carefully and practice the examples. Although you may be familiar with mechanical adding machines or calculators, you will find that your Electronic Calculator is far more capable of solving a variety of problems not possible on mechanical adding machines or calculators.

HOME

Budgets	Unit Pricing
Taxes	Interest Rate
Check Book Balancing	Clothing Invoices
Grocery Bills	Stock & Bond Investments

BUSINESS

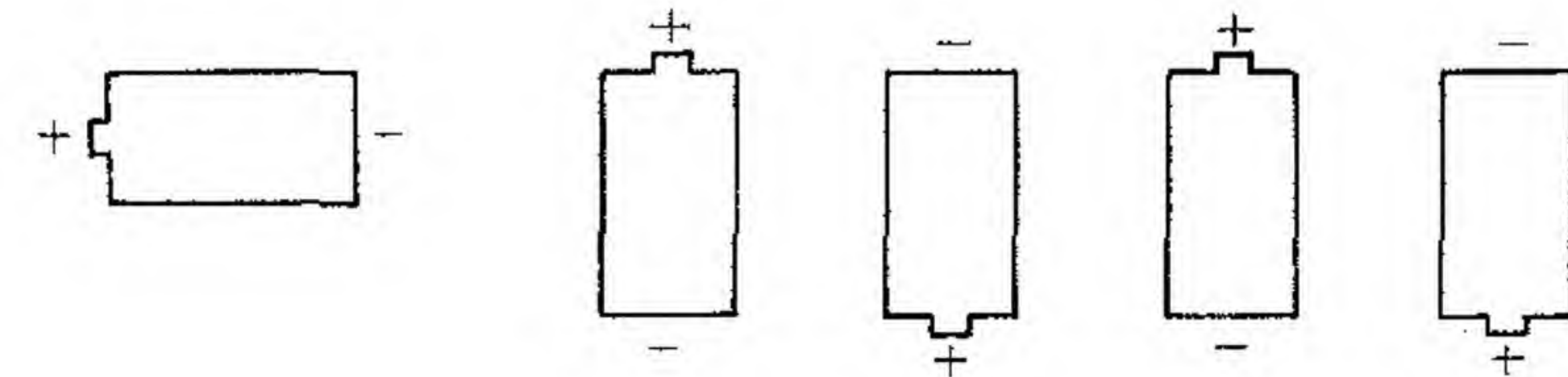
Expense Report	Percentage Profit
Cost Analysis	Compound Interest
Payroll	Taxes
Invoicing	

SCHOOL

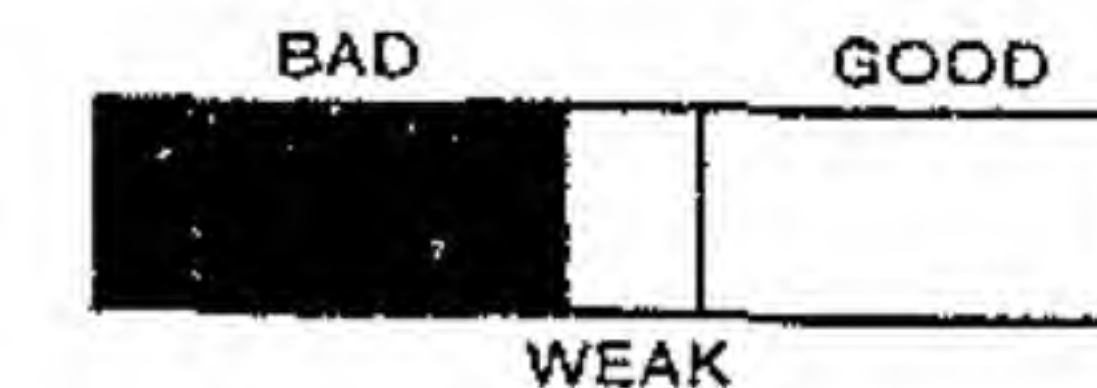
Check Basic Arithmetic	Away From Home Budget
School Tuition	Slide Rule Calculations

Convenient, rapid, accurate. You'll find many uses for your Electronic Calculator.

- Your Portable Electronic Calculator is supplied with 4 batteries. To install batteries remove bottom cover and insert the batteries into the compartment. It is important that the proper polarity be followed as indicated by the diagram on the cover.



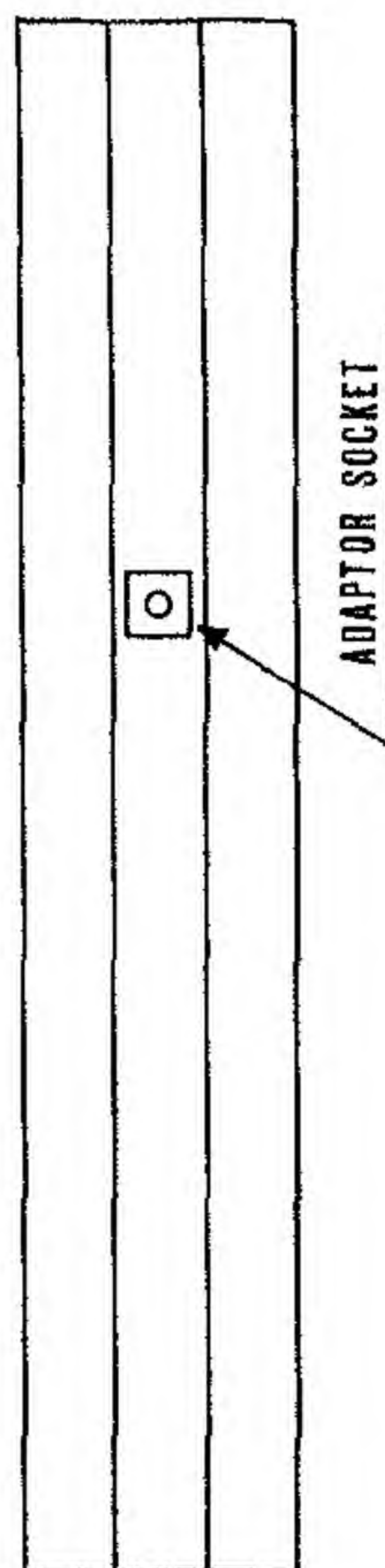
- The battery meter indicates the condition of the battery system.



Batteries which indicate in the "WEAK" area should be replaced as soon as possible.

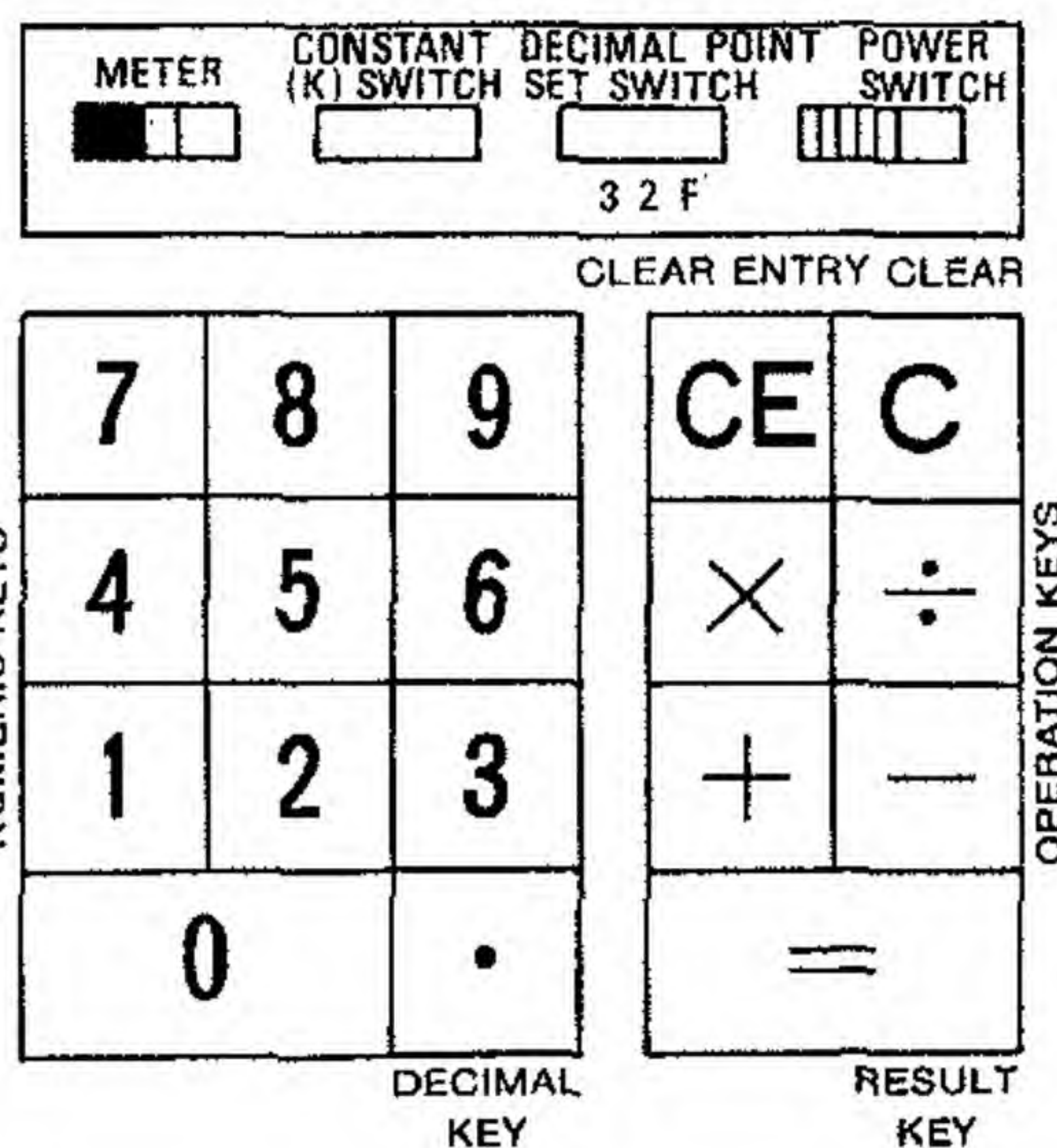
Note: To prevent damage to your calculator, remove bad batteries immediately.

- Under normal operating conditions new batteries will provide from 8-10 hours of calculating time. To extend battery life turn off the calculator, by closing the display cover, as soon as your calculations are finished.
- For operation from A.C. 110-120 volts connect the adaptor (Type M5) to any convenient socket and push the jack into the socket on the left side of the case. When the jack is inserted the batteries are automatically disconnected.



OVERFLOW INDICATOR
POS. E
NEG. E
MINUS SIGN —

DISPLAY



POWER SWITCH - Turns the Calculator "ON" or "OFF". The switch is connected to the display cover so that closing the cover will turn off the calculator.

CONSTANT SWITCH (K) - A number may be stored and used as a constant for division or multiplication. Whenever a single number is needed in a series of calculations, the constant factor (K) will be used.

DECIMAL POINT SET - Automatic Floating Decimal (F), or Fixed Decimal point (2 or 3) may be selected.

NUMERIC KEYS - Standard 1 to 9 Keyboard provided as well as [0] and decimal point [·]. For those able to use the Touch Method the number [5] button is provided with a center point of reference for your fingers.

CLEAR KEY [C] - Clears the Calculator and display. Before starting any new calculation it is necessary to clear all prior entries by touching the [C] key.

CLEAR ENTRY KEY [CE] - Clears the Calculator of the last entry or result. To be used in the event of mistaken entry but only after operate key has been touched.

OPERATE KEYS [+][-][×][÷] - These keys instruct the Calculator as to the mathematical operation to be performed.

RESULT KEY [=] - At conclusion of a series of calculations touching this key will immediately place the answer on the display (readout).

8-DIGIT READOUT DISPLAY - Planar fluorescent display for clear, legible numbers.

OVERFLOW INDICATOR - E - When the result of a calculation exceeds 8 digits (99,999,999), the capacity of the Calculator has been reached. This is indicated by the appearance of E on the left side of the display. In addition, the decimal point will shift to the right of the No. 8 digit. No further calculations are possible until the Calculator is cleared.

Note: A negative overflow is indicated by a combination of overflow and minus indicator - E.

MINUS SIGN — - This indicator will light up to show a negative number or credit balance.

- Push power switch "ON" and touch Clear Key [C]
- Set K switch to "OFF" unless constant calculations are desired.
- Set decimal point switch in automatic floating (F) position.
- To enter a number "touch" the numeric keys in sequence-
example-to enter 123.45 "touch" -

	Display
[1][2][3][.][4][5]	123.45

- To clear an incorrect entry use the Clear Entry key [CE].
Example: Your calculation is $12 \times 7 =$
You have entered [1] [2] [X]
In error you touch [8]

Display
12.
8.

— (Mistake) —

To clear mistake, touch [CE] key	0.
Enter correct number [7]	7.
Touch result key [=]	Answer 84.

Note: Do not duplicate operate command (+, ×, ÷) after using [CE] key except for minus.

For most calculations you will probably prefer to leave the decimal point switch in the floating (F) or automatic position. In this position the decimal point will automatically shift to the correct position within the 8 digits. For calculations of money or other purposes your calculator can be preset for 2 or 3 decimal places.

Example: Divide 22 by 7 ($22 \div 7 =$)

For Decimal point set "F"	3.1428571
For Decimal point set "2"	3.14
For Decimal point set "3"	3.142

Note: In Fixed Decimal Point positions (2,3,) Calculator automatically rounds down last digit.

ADDITION

The mathematical notation for addition is $A + B = \times$

Example No. 1: to calculate $13.35 + 4.56 =$	Display
A. Touch [C]	0.
B. Enter 13.35	13.35
C. Touch [+]	13.35
D. Enter 4.56	4.56
E. Touch [=]	Answer 17.91

Example No. 2: to calculate $9 + 17 + 32.5 =$

	Display
A. Touch [C]	0.
B. Enter 9	9.
C. Touch [+]	9.
D. Enter 17	17.
E. Touch [+]	26.
F. Enter 32.5	32.5
G. Touch [=]	Answer 58.5

Example No. 3: to calculate $\$12.50 + \$6.35 + \$4.30$

	Display
A. Touch [C]	0.
B. Enter 12.50	12.50
C. Touch [+]	12.5

Note that unnecessary "0" is not displayed when using the floating decimal (F) point position.

D. Enter 6.35	6.35
E. Touch [+]	18.85
F. Enter 4.30	4.30
G. Touch [=]	Answer 23.15

The mathematical notation for subtraction is $A - B = X$

Example No. 1: To calculate $436.14 - 103.9 =$

	Display
A. Touch [C]	0.
B. Enter 436.14	436.14
C. Touch [-]	436.14
D. Enter 103.9	103.9
E. Touch [=]	Answer 332.24

Example No. 2: to calculate $183.7 - 341.6 =$

A. Touch [C]	0.
B. Enter 183.7	183.7
C. Touch [-]	183.7
D. Enter 341.6	-341.6
E. Touch [=]	Answer -157.9

Note: the answer is a negative number (credit balance)

Example No. 3: mixed addition and subtraction
to calculate $16 - 42 + 97 =$

	Display
A. Touch [C]	0.
B. Enter 16	16.
C. Touch [-]	16.
D. Enter 42	-42.
E. Touch [+]	-26.
F. Enter 97	97.
G. Touch [=]	Answer 71.

2.2 Multiplication

The mathematical notation for multiplication is $A \times B = X$

Example No. 1: to calculate $31.62 \times 58.6 =$

	Display
A. Touch [C]	0.
B. Enter 31.62	31.62
C. Touch [X]	31.62
D. Enter 58.6	58.6
E. Touch [=]	Answer 1852.932

Example No. 2: to calculate $3 \times 4 \times 1.05$

	Display
A. Touch [C]	0.
B. Enter 3	3.
C. Touch [X]	3.
D. Enter [4]	4.
E. Touch [\times]	12.
F. Enter 1.05	1.05
G. Touch [=]	Answer 12.6

The mathematical notation for division is $A \div B = X$ or $\frac{A}{B} = X$

Example No. 1: to calculate $196 \div 7 =$

	Display
A. Touch [C]	0.
B. Enter 196.	196.
C. Touch [\div]	196.
D. Enter 7	7.
E. Touch [=]	Answer 28.

Example No. 2: to calculate $144 \div 9 \div 2 =$

	Display
A. Touch [C]	0.
B. Enter 144	144.
C. Touch [\div]	144.
D. Enter 9	9.
E. Touch [\div]	16.
F. Enter 2	2.
G. Touch [=]	Answer 8.

Example No. 3 Mixed multiplication and division
to calculate $24 \div 4 \times 3 =$

	Display
A. Touch [C]	0.
B. Enter 24	24.
C. Touch [\div]	24.
D. Enter 4	4.
E. Touch [X]	6.
F. Enter [3]	3.
G. Touch [=]	Answer 18.

For constant (K) multiplication the FIRST number entered is the constant.

Example No. 1 $6 \times 3 = 6 \times 12 = 6 \times 19 =$
(For this example, 6 is the constant)

	Display
A. Touch [C]	0.
B. Push "K" switch up	0.
C. Enter 6	6.
D. Touch [X]	6.
E. Enter 3	3.
F. Touch [=]	Answer for 6×3 18.
G. Enter 12	12.
H. Touch [=]	Answer for 6×12 72.
I. Enter 19	19.
J. Touch [=]	Answer for 6×19 114.

For constant (K) division the SECOND number entered is the constant.

Example No. 1 $142 \div 3 = 96 \div 3 = 113 \div 3 =$

	Display
A. Touch [C]	0.
B. Push K switch up	0.

C. Enter 142	142.
D. Touch [\div]	142.
E. Enter [3]	3.
F. Touch [=]	Answer for $142 \div 3$ 47.333333
G. Enter 96	96.
H. Touch [=]	Answer for $96 \div 3$ 32.
I. Enter 113	113.
J. Touch [=]	Answer for $113 \div 3$ 37.6666666

To find exponents (Power calculation)

Example: $3^2 3^3 3^4 3^5 3^6$

A. Touch [C]	0.
B. Push Kswitch up	0.
C. Enter 3	3.
D. Touch [X]	3.
E. Enter 3	3.
F. Touch [=]	Answer 3^2 9.
G. Touch [=]	Answer 3^3 27.
H. Touch [=]	Answer 3^4 81.
I. Touch [=]	Answer 3^5 243.
J. Touch [=]	Answer 3^6 729.
	etc.

Note: After completing calculations using K be sure to move K switch to "off" position.

Example: $3 \div 2 \times 16 - 8.4 + 12 =$

	Display
A. Touch [C]	0.
B. Enter 3	3.
C. Touch [\div]	3.
D. Enter 2	2.
E. Touch [X]	1.5
F. Enter 16	16.
G. Touch [$-$]	24.
H. Enter 8.4	8.4
I. Touch [$+$]	15.6
J. Enter 12	12.
K. Touch [=]	27.6
	Answer

Example of Overflow (E)

Multiply $4876 \times 368 \times 243 \times 193$

	Display
A. Touch [C]	0.
B. Enter 4876	4876.
C. Touch [X]	4876.
D. Enter 368	368.
E. Touch [X]	1794368.
F. Enter 243	243.
G. Touch [X]	E 4.3603142

Note: Calculator has reached maximum capacity and no further calculation will be possible. If you try to proceed:

H. Enter 193	(Cannot Accept) E 4.3603142
I. Touch [$-$]	(Cannot Accept) E 4.3603142

- Compact Portable
Size $1 \frac{1}{4}$ " deep \times $4 \frac{1}{2}$ " wide \times $7 \frac{1}{2}$ " high
- Weight (with Batteries) 23 ounces
- A.C. or Battery Operation
- Uses 4 Standard Flashlight Batteries (U.S.A. Type C — Japan UM2)
- Meter provides constant monitoring of battery condition.
- Eight-Digit Fluorescent Display. Planar 7-segment digits with decimal point in sealed unit.
- Overflow Indicator — Positive (E), Negative (E)
- Minus Sign or Negative Number Indicator ($-$)
- Constant Factor (K) Memory Switch
- Fixed or Floating Decimal Point set
- Automatic Leading and Trailing Zero Suppression
- LSI (Large Scale Integration) System (Equivalent to more than 8,000 transistors)
- Calculation Speed: Addition and Subtraction, thousandths of a second
Multiplication and Division, Fifty thousandths of a second
- Keyboard has Gold Plated Contacts for extensive trouble free operation.
- Convenient handle for carrying or fold under to elevate display
- Display cover pops up when unit is on. Closing cover automatically shuts off calculator.